



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Trace Analysis, Inc.

Certificate of Analysis Number:

07010867

<u>Report To:</u> Trace Analysis, Inc. Nell Green 6701 Aberdeen Avenue Suite 9 Lubbock TX 79424- ph: (806) 794-1296 fax:	<u>Project Name:</u> Trace Analysis <u>Site:</u> Lubbock, TX <u>Site Address:</u> <u>PO Number:</u> <u>State:</u> Texas <u>State Cert. No.:</u> T104704205-06-TX <u>Date Reported:</u> 1/29/2007
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This Report Contains A Total Of 12 Pages

Excluding This Page, Chain Of Custody

And

Any Attachments

1/29/2007

Date



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Case Narrative for:
Trace Analysis, Inc.

Certificate of Analysis Number:

07010867

Report To: Trace Analysis, Inc. Nell Green 6701 Aberdeen Avenue Suite 9 Lubbock TX 79424- ph: (806) 794-1296 fax:	Project Name: Trace Analysis Site: Lubbock, TX Site Address: PO Number: State: Texas State Cert. No.: T104704205-06-TX Date Reported: 1/29/2007
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Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report (" mg/kg-dry " or " ug/kg-dry ").

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Some of the percent recoveries and RPD's on the QC report for the MS/MSD may be different than the calculated recoveries and RPD's using the sample result and the MS/MSD results that appear on the report because, the actual raw result is used to perform the calculations for percent recovery and RPD.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

Erica Cardenas
Project Manager

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1/29/2007

Date

Test results meet all requirements of NELAC, unless specified in the narrative.



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Report To: Trace Analysis, Inc.
Nell Green
6701 Aberdeen Avenue
Suite 9
Lubbock
TX
79424-
ph: (806) 794-1296

fax: (806) 794-1298

Project Name: Trace Analysis

Site: Lubbock, TX

Site Address:

PO Number:

State: Texas

State Cert. No.: T104704205-06-TX

Date Reported: 1/29/2007

Fax To:

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
114008	07010867-01	Water	1/12/2007	1/19/2007 10:00:00 AM		<input type="checkbox"/>
114010	07010867-02	Water	1/12/2007	1/19/2007 10:00:00 AM		<input type="checkbox"/>
114012	07010867-03	Water	1/12/2007	1/19/2007 10:00:00 AM		<input type="checkbox"/>
114014	07010867-04	Water	1/12/2007	1/19/2007 10:00:00 AM		<input type="checkbox"/>
114016	07010867-05	Water	1/12/2007	1/19/2007 10:00:00 AM		<input type="checkbox"/>
114018	07010867-06	Water	1/12/2007	1/19/2007 10:00:00 AM		<input type="checkbox"/>

1/29/2007

Erica Cardenas
Project Manager

Date

Joel Grice
Laboratory Director

Ted Yen
Quality Assurance Officer



HOUSTON LABORATORY
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Client Sample ID: 114008

Collected: 01/12/2007 0:00

SPL Sample ID: 07010867-01

Site: Lubbock, TX

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
SEMIVOLATILE HYDROCARBONS - GLYCOL				MCL	SW8015B	Units: mg/L	
Ethylene Glycol	23		20	1	01/26/07 5:21	MNR	3648459
Surr: Isobutanol	115		% 50-150	1	01/26/07 5:21	MNR	3648459

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
TNTC - Too numerous to count

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



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Client Sample ID: 114010

Collected: 01/12/2007 0:00

SPL Sample ID: 07010867-02

Site: Lubbock, TX

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
SEMIVOLATILE HYDROCARBONS - GLYCOL				MCL	SW8015B	Units: mg/L	
Ethylene Glycol	ND		20	1	01/26/07 5:45	MNR	3648460
Surr: Isobutanol	114		% 50-150	1	01/26/07 5:45	MNR	3648460

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
TNTC - Too numerous to count

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



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Client Sample ID: 114012

Collected: 01/12/2007 0:00

SPL Sample ID: 07010867-03

Site: Lubbock, TX

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
SEMIVOLATILE HYDROCARBONS - GLYCOL				MCL	SW8015B	Units: mg/L	
Ethylene Glycol	ND		20	1	01/26/07 6:08	MNR	3648461
Surr: Isobutanol	113		% 50-150	1	01/26/07 6:08	MNR	3648461

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
TNTC - Too numerous to count

>MCL - Result Over Maximum Contamination Limit(MCL)
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MI - Matrix Interference



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Client Sample ID: 114014

Collected: 01/12/2007 0:00

SPL Sample ID: 07010867-04

Site: Lubbock, TX

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
SEMIVOLATILE HYDROCARBONS - GLYCOL				MCL	SW8015B	Units: mg/L	
Ethylene Glycol	ND		20	1	01/26/07 6:32	MNR	3648462
Surr: Isobutanol	116		% 50-150	1	01/26/07 6:32	MNR	3648462

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
TNTC - Too numerous to count

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



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Client Sample ID: 114016

Collected: 01/12/2007 0:00

SPL Sample ID: 07010867-05

Site: Lubbock, TX

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
SEMIVOLATILE HYDROCARBONS - GLYCOL				MCL	SW8015B	Units: mg/L	
Ethylene Glycol	ND		20	1	01/26/07 6:55	MNR	3648463
Surr: Isobutanol	115		% 50-150	1	01/26/07 6:55	MNR	3648463

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
TNTC - Too numerous to count

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference



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Client Sample ID: 114018

Collected: 01/12/2007 0:00

SPL Sample ID: 07010867-06

Site: Lubbock, TX

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
SEMIVOLATILE HYDROCARBONS - GLYCOL				MCL	SW8015B	Units: mg/L	
Ethylene Glycol	ND		20	1	01/26/07 7:19	MNR	3648464
Surr: Isobutanol	114		% 50-150	1	01/26/07 7:19	MNR	3648464

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
TNTC - Too numerous to count

>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

Quality Control Documentation



Quality Control Report

HOUSTON LABORATORY
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Trace Analysis, Inc.

Trace Analysis

Analysis: Semivolatile Hydrocarbons - Glycol
Method: SW8015B

WorkOrder: 07010867
Lab Batch ID: R190651

Method Blank

RunID: HP_T_070126B-3648451 Units: mg/L
Analysis Date: 01/26/2007 1:51 Analyst: MNR

Analyte	Result	Rep Limit
Ethylene Glycol	ND	10
Surr: Isobutanol	102.1	50-150

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
07010867-01A	114008
07010867-02A	114010
07010867-03A	114012
07010867-04A	114014
07010867-05A	114016
07010867-06A	114018

Laboratory Control Sample (LCS)

RunID: HP_T_070126B-3648450 Units: mg/L
Analysis Date: 01/26/2007 1:28 Analyst: MNR

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Ethylene Glycol	400	398	99.5	61	135

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 07011071-01
RunID: HP_T_070126B-3648467 Units: mg/L
Analysis Date: 01/26/2007 10:19 Analyst: MNR

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Ethylene Glycol	21.5	200	225	102	200	217	97.5	3.84	20	25	151

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

*Sample Receipt Checklist
And
Chain of Custody*



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Sample Receipt Checklist

Workorder:	07010867	Received By:	AE
Date and Time Received:	1/19/2007 10:00:00 AM	Carrier name:	UPS
Temperature:	4°C	Chilled by:	Water Ice

- | | | | |
|--|---|-----------------------------|--|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact on shipping container/cooler? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. Container/Temp Blank temperature in compliance? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Water - VOA vials have zero headspace? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | VOA Vials Not Present <input type="checkbox"/> |
| 13. Water - Preservation checked upon receipt (except VOA*)? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Applicable <input checked="" type="checkbox"/> |

*VOA Preservation Checked After Sample Analysis

SPL Representative:
Client Name Contacted:

Contact Date & Time:

Non Conformance Issues:
Client Instructions:

07010867

Page of

LAB Order ID #

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel: (806) 794-1296
Fax: (806) 794-1298
1 (800) 378-1296

5002 Basin Street, Suite A1
Midland, Texas 79703
Tel: (432) 689-6301
Fax: (432) 689-6313

200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel: (915) 585-3443
Fax: (915) 585-4944
1 (888) 588-3443

6015 Harris Pkwy., Suite 110
Ft. Worth, Texas 76132
Tel: (817) 201-5280

Company Name: Phone #:

Address: (Street, City, Zip) Fax #:

Contact Person: Nell Green E-mail:

Invoice to: if different from above

Project #: Project Name:

Project Location (including state): Sampler Signature:

LAB # LAB USE ONLY	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX				PRESERVATIVE METHOD						SAMPLING	
				WATER	SOIL	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	NONE	DATE	TIME
	114008	2		✓										1-12-07	
	114010	2		✓											
	114012	2		✓											
	114014	2		✓											
	114016	2		✓											
	114018	2		✓											

Shipped by: Date: Time: Received by: Date: Time: 11/17/07

Shipped by: Date: Time: Received by: Date: Time:

Shipped by: Date: Time: Received by: Date: Time: 11/17/07

ANALYSIS REQUEST (Circle or Specify Method No.)

MTBE 8021B / 602 / 8260B / 624	
BTEX 8021B / 602 / 8260B / 624	
TPH 418.1 / TX1005 / TX1005 Ex(C35)	
TPH 8015 GRO / DRO / TVHC	
PAH 8270C / 625	
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
RCI	
GC/MS Vol. 8260B / 624	
GC/MS Semi. Vol. 8270C / 625	
PCBs 8082 / 608	
Pesticides 8081A / 608	
BOD TSS, pH	
Moisture Content	
Turn Around Time if different from standard	

Ethylene Glycol

LAB USE ONLY

Intact: Y / N
Headspace: Y / N
Temp: 40°
Log-in-Review

REMARKS:

☐ Dry Weight Basis Required
☐ TRRP Report Required
☐ Check if Special Reporting Limits Are Needed

Initial of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.

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